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NOTES ON SOME NON-PASSERINE BIRDS FROM EASTERN ECUADOR

By

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A new collection of birds from eastern Ecuador contains a number of significant specimens. The Ecuadorian segment of the upper Amazon basin has been generally neglected by ornithologists since Chapman's study of 1926, while the adjacent areas of Colombia and Peru have been more recently investigated. The latter studies have raised questions about the continuity of populations along the eastern base of the Andes and this new collection answers some of these questions by documenting the presence of certain forms in eastern Ecuador.

In 1963 and 1964, during the months June-September, I made collecting trips to eastern Ecuador, working at altitudes between 300 and 1,500 meters. In 1963, I spent a month and a half at Limoncocha, and a month on Mount Sumaco. Accompanied by Richard D. Chandler in 1964, I returned to collect on the slopes of Sumaco for two months. A collection of 1,900 specimens from these two expeditions is deposited in the Museum of Comparative Zoology. The present paper contains the most noteworthy records from among the 145 forms of non-passerines represented in this collection.

COLLECTING LOCALITIES

COTAPINO (often labeled on maps as "Concepción"): 0°45'S, 77°25'W; alt. 700 m¹; 25 June-12 July 1964; 250 specimens.

At the junction of Río Pucuno and Río Cotapino, this hacienda serves as a departure point for Sumaco trips. Besides an airstrip

¹ Altitudes are based on readings taken with a pocket altimeter at each locality.

and some 60 acres of cultivated land, Cotapino offers shelter and a small number of Quechuan Indian laborers. Most of the specimens were collected here with mist nets.

CUYUJA: $0^{\circ}25'S$, $78^{\circ}03'W$; alt. 2,400 m; 19 June 1964; 9 specimens.

Chandler and I visited this town 10 km east of Papallacta, hoping to find conditions comparable to those on the slopes of Sumaco. Collecting here was incidental, but promising, because the deforestation characterizing Papallacta has not yet reached Cuyuja.

EUGENIO: $0^{\circ}46'S$, $77^{\circ}24'W$; alt. 700 m; 16-22 July 1964; 111 specimens.

A day's foot travel northwest toward Sumaco from Cotapino, the locality takes its name from the lone Quechuan inhabitant of this last settlement on the way to Sumaco.

LIMONCOCHA: $0^{\circ}25'S$, $76^{\circ}38'W$; alt. 300 m; 25 June-2 August 1963; 300 specimens.

Limoncocha is the site of a large missionary base camp, including an airstrip, housing for United States missionary families, and a Quechuan village, all of which has been established since 1955 on the shores of a lake in the midst of tropical forest. The large lake whose lemonade-colored water inspired the name, Limoncocha, lies two kilometers inland from the mouth of Río Jivíno on the Río Napo. There are few such lakes in eastern Ecuador, and none as unspoiled as Limoncocha. Consequently, the lake and its outlet have yielded some unique specimens, several forms new to Ecuador, and at least one new race.

LOWER RÍO PUCUNO: $0^{\circ}46'S$, $77^{\circ}28'W$; alt. 500 m; 19-31 August 1963; 135 specimens.

Halfway between Cotapino and Eugenio, a traveller must ford the Río Pucuno afoot. In 1963, high water made the river impassable for a few days, during which delay I collected along the banks above and below the ford.

MONTALVO: $02^{\circ}05'S$, $76^{\circ}57'W$; alt. 250 m; 5 specimens.

I purchased several specimens of apparent interest from this locality from R. Olalla, who worked here as an independent collector in 1964.

RÍO NEGRO: $01^{\circ}25'S$, $78^{\circ}03'W$; alt. 1,200 m; 12-14 September 1964; 35 specimens.

Along the road near this village, a few specimens were collected for comparison with those from similar altitudes on Sumaco.

MOUNT SUMACO: Mount Sumaco, an isolated massif rising to about 4,000 m, lies about 40 km southeast of Baeza, and about 100 km southeast of Quito. Four collecting camps were established on the southeast slopes. I have arbitrarily prefixed the name Sumaco to all localities above Eugenio, the highest point settled by Quechuan Indians.

SUMACO, GUATICOCHA: $0^{\circ}45'S$, $77^{\circ}24'W$; alt. 750 m; 16-24 August 1964; 123 specimens.

Only a few hours due west of Eugenio lies this tiny, perfectly round, and very deep lake, where Chandler and I established a camp.

SUMACO, HEAD OF RÍO GUATARACO: $0^{\circ}40'S$, $77^{\circ}35'W$; alt. 1,350 m; 24 July-5 August 1964; 350 specimens.

The junction of several brooks in a series of waterfalls a few hundred meters below this camp, marks the beginning of the Río Guataraco.

SUMACO, PALM PEAK (translated from local Quechuan hunters' designation, *Ramus-Urcu*): $0^{\circ}39'S$, $77^{\circ}36'W$; alt. 1,500 m; 6-14 August 1964; 209 specimens.

Palm Peak is the rim of the altiplano which slopes gradually upward for two days' travel to the final steep slope of the mountain peak. Most of the collecting was done on the altiplano.

SUMACO, UPPER RÍO PUCUNO: $0^{\circ}36'S$, $77^{\circ}35'W$; alt. 1,200 m; 11-16 August 1963; 135 specimens.

The highest camp in 1963 was on the narrow ridge separating the two principal rivers of this face of Sumaco, the Pucuno and the Guataraco.

SYSTEMATIC NOTES

NYCTICORAX PILEATUS (Boddaert)

Limoneocha, 1 ♂.

This wide-ranging form has not been recorded before from Ecuador, where its occurrence was to be expected. This individual was shot in the cow pasture at Limoneocha, a habitat somewhat unusual in eastern Ecuador, as cattle in the country are confined mostly to the highlands.

IXOBRYCHUS EXILIS LIMONCOCHAE subsp. nov.

Type: Adult male, No. 285,860, Museum of Comparative Zoology, collected at Limoneocha, alt. 300 m, Río Napo, eastern Ecuador, by D. W. Norton, on 6 July 1963.

Diagnosis: Similar to nominate *exilis*, but cheeks and auriculars shading to chestnut, ventrum less streaked. Similar to *erythromelas* in color of cheeks, but wing and bill somewhat longer, ventrum less richly colored, throat less streaked; dorsum of female grayish brown, not reddish brown as in *erythromelas*. Distinguished from *bogotensis* by chestnut rather than ochraceous cheeks, by lighter ventrum, with less streaking on throat, and by a somewhat shorter bill. Generally smaller than *peruvianus*, with ventrum, head, and wing coverts tawny rather than ochraceous.

Range: Known only from the type locality.

MEASUREMENTS

| | | Wing | Culmen (exposed) |
|---------------------|--------------|-----------------------------|--------------------------|
| <i>limoncochae</i> | (1 ♂ — type) | 120 mm | 45 mm |
| | (1 ♀) | 120 | 46 |
| <i>exilis</i> | (4 ♂) | 112-121 (117.8 ± 1.7) | 44-49 ($46.3 \pm .09$) |
| | (1 ♀) | 112 | 43 |
| <i>erythromelas</i> | (3 ♂) | 106-113 (109.3 ± 1.7) | 42-44 (42.7 ± 0.5) |
| | (2 ♀) | 109-113 (111.0 ± 1.4) | 40.0 |
| <i>bogotensis</i> | (2 ♂) | 116-122 (119.0 ± 2.1) | 40.0 |
| | (5 ♀) | 113-125 (120.8 ± 2.1) | 37-40 (39.0 ± 0.6) |
| <i>peruvianus</i> | (1 ♂) | 125 | 53 |

Remarks: The two specimens of *limoncochae* were collected with a single shot and, therefore, are presumed to have been mated, although their gonads were not enlarged.

While examining comparative material, I found that a female (AMNH No. 151,639) from Antioquia, Colombia, is referable to *bogotensis*, which extends the known range of that race considerably to the northwest.

I tentatively identified as *peruvianus* a mounted specimen in adult male plumage at the Colegio San Bolívar in Ambato, Ecuador. The wing measures 127 mm and the culmen 50 mm. Although there were no data, the curator of the collection, who is the widow of the collector, claimed that her husband shot all his specimens in Ecuador. Corroboration of this doubtful record would extend the known range of *peruvianus* north from coastal Peru (Dept. Libertad) to western Ecuador.

The origins of the races in northern South America are deserving of speculation. Significantly, I believe, the southern limits of migration of the two North American races are just to the north (eastern Panama). *Ixobrychus exilis* may originally have been a temperate and entirely migratory species. In this case,

the South American races have arisen at the southern limits of the wintering populations, and may represent descendants of a few birds which gave up the migratory habit to breed near the equator. The South American forms must then be more recent developments than the splitting of the migratory population into eastern and western subspecies, because the four southern forms are neatly divisible morphologically into eastern and western types. The easternmost form, *erythromelas*, seemingly shows the extreme in characteristics of nominate *exilis* of eastern United States, in its small size and generally reddish brown coloring. The westernmost, *peruvianus*, is similarly related to *hesperis* of the western United States, as it shows the extreme of large size and grayish brown coloring. In between, *limoncochae* is a less extreme eastern type, and *bogotensis* a less extreme western type.

Specimens examined: *limoncochae*: Ecuador, Limoncocha, 1 ♂, 1 ♀; *erythromelas*: Surinam, Paramaibo, 3 ♂, 1 ♀; *bogotensis*: Colombia, Savana de Bogotá, 2 ♂, 4 ♀; Antioquía, 1 ♀; *peruvianus*: Peru, Dept. Lima, Vegueta, 1 ♂, 1 imm.; "Ecuador", 1[♂].

ARAMIDES CALOPTERUS Selater and Salvin

Sumaco, Guaticocha, 1 ♂; Montalvo, 1 ♂.

A specimen from Montalvo, collected by R. Olalla in April 1964, is significantly lighter than any in a series from Río Suno and Sumaco. However, I believe Olalla dries skins in direct sunlight, which would cause fading, and explain this disparity.

PORPHYRULA MARTINICA (Linnaeus)

Limoncocha, 1 ♂, 1 ♀.

Although it is recorded from western Ecuador, I find no previous record of this wide-ranging species in eastern Ecuador, where its occurrence was to be expected.

PORPHYRULA FLAVIROSTRIS (Boddaert)

Limoncocha, 1 ♂.

The species, new to Ecuador, is apparently uncommon in upper Amazonia, for de Schauensee (1949: 432) includes it in the faunal list of Colombia, also on the basis of a single specimen (Florencia). Individuals occur regularly at Limoncocha, but I have not seen any elsewhere in eastern Ecuador.

JACANA SPINOSA INTERMEDIA (Sclater)

Limonecocha, 2 ♀.

Specimens from Limonecocha are clearly referable to *intermedia*. This first record of the species from eastern Ecuador extends the known range of *intermedia* south from eastern Colombia to at least the Río Napo in Ecuador. Hellmayr and Conover (1948:9) questioned the validity of *peruviana*, of north-eastern Peru but comparison of 14 specimens from northeastern Peru with a series of *intermedia* from Venezuela, Colombia, and Ecuador, shows Peruvian specimens to be much the largest and darkest in the group, and easily separable from the reasonably uniform *intermedia* specimens.

VANELLUS RESPLENDENS (Tschudi)

Limonecocha, 2 ♂ ; Mt. Cotopaxi, Laguna de Limpio, 2 ♀.

The Andean lapwing seems never to have been recorded from below 2,000 m anywhere in its range (Ecuador to northern Chile). The Limonecocha specimens were observed daily (personal communication) on the grassy airfield of the mission station (alt. 300 m) from February to June 1963, before I collected them there in July. This unusual pair, frequenting an artificial habitat cleared only recently of tropical forest, proved to be two males coming into adult plumage and having small gonads. These birds were much tamer than individuals observed and collected on Mt. Cotopaxi. The unique record probably represents young strays lost during the seasonal altitudinal migrations of this species in the Andes. Aside from the airstrip, the only other sizable unforested areas near Limonecocha are the gravel bars of the nearby Río Napo. This pair was indeed traced twice to the gravel bars during the daylight hours. Significantly, the Quechuan Indians of Limonecocha could give no local name for this bird, whereas all regularly occurring species on the Napo receive specific and descriptive Quechuan names.

GENUS EUTOXERES

Eutoxeres condamini condamini (Bourcier): Cotapino, 3 ♂, 5 ♀.

Eutoxeres aquila aquila (Bourcier): Eugenio, 2 ♂ ; Sumaco, head of Río Guataraco, 1 ♂ ; Sumaco, Guaticochoa, 1 ♀.

The ranges of these sibling species overlap in eastern Ecuador and adjacent areas of Colombia and Peru. Since Chandler and I



FIG. 1. Distribution of *Eutorxeres aquila* and *Eutorxeres condamini*.

never found both species in the same locality, it is possible that there is a difference in the habitat preferences of the two species. It seems that *E. condamini* occurs in open cultivated areas, at low elevations, whereas *E. aquila* occurs in dense forest at any altitude up to at least 1,500 m.

The distribution of the forms of *Eutoxeres* may be related to the distribution of a principal food source. Greenewalt (1960: legend, Pl. 34) observed *E. aquila* feeding on "platanillos," or plantains of the genus *Heliconia*, using its highly specialized, downcurved bill to draw nectar from the deep, upright bracts of the flowers. Chandler and I had best results netting both species of *Eutoxeres* when the nets were placed close to *Heliconia* plants, which further suggests the dependence of *Eutoxeres* upon the plantains. The genus *Eutoxeres* occurs in northwestern South America, roughly where the greatest concentrations of the 35-odd species of *Heliconia* also occur. The flowering periods of the various species of *Heliconia* doubtless span the year, probably providing a steady supply of food for the hummingbirds.

Observations made in eastern Ecuador suggest that the critical factor in determining local distribution of the sibling species is the abundance of *Heliconia* plants. When land in eastern Ecuador is cleared, and particularly when bananas are planted, many "platanillos" invade the clearing. Apparently, *E. c. condamini* establishes itself in the midst of this abundance, while *E. a. aquila* retreats to the forest. Although both forms have been recorded sympatrically at La Morelia, Colombia (de Schauensee, 1949: 541), and at the mouth of Río Curaray (Zimmer, 1950: 1), I suspect that *condamini* is found in the settlements while *aquila* is found farther afield. These records reflect either inexactness in recording the locality, or possibly the passage of time between collectors' visits, during which a locality supporting *aquila* was cultivated, thereby attracting *condamini*.

The origin of these sibling species merits some speculations. The simplest explanation of the present distribution of the species of *Eutoxeres* is that an original South American population was split by the Andean uplift, giving rise to *condamini* to the east and *aquila* to the west of the cordillera. Subsequently, *aquila* has colonized the isthmus of Panama, and has spilled eastward over the Andes to invade the range of *condamini*.

GENUS TOPAZA

Topaza pyra (Gould): Cotapino, 1 ♂; Sumaco, Guaticocha, 1 ♀.

These specimens are the first definitely to extend the known range of *pyra* so far up the Río Napo, contradicting Oberholser's (1902: 322) assertion that the species does not occur above Coca on the upper Napo. Of greater interest is the proof that *T. pyra*

occurs west of *T. pella pamprepta*, an endemic form known only from Boca Suno on the Napo in eastern Ecuador. The population of *T. p. pamprepta* seems to be surrounded by the morphologically similar *T. pyra*, isolated in Boca Suno, 2,000 km from the other races of *pella*, which occur in the Guianas and in Pará, Brazil. The validity of *pamprepta*, and the present range extension of *pyra* make it impossible to accept Peters' (1945: 92) suggestion that *pella* and *pyra* might be conspecific. I have examined the type of *pamprepta*, finding Oberholser's (1902: 322) description and the data given by the collectors, both accurate. The type is similar in pattern to nominate *pella*, but it is distinguished by a much longer tail and somewhat shorter bill. One can conclude that the curiously spotty distributions of the taxa of *Topaza* are artifacts due to the rarity of these equatorial hummingbirds. Future records of *pella* may come from northern Brazil, between Ecuador and the Guianas.

TROGON RUFUS SULPHUREUS Spix

Sumaco, Guaticocha, 1 ♂ ; Sumaco, Guaticocha, 1 ♀ (preserved as a skeleton).

Although this subspecies was to be expected in eastern Ecuador, Peters (1945: 157) omits both eastern Ecuador and eastern Colombia from its range. Apparently, the only previous records were specimens labeled with doubtful accuracy as being from Coca, Río Napo, and "Equateur" (Zimmer, 1948: 29). The present record shows *sulphureus* to occur almost to the foot of the Andes and up to nearly 800 m in this part of its range.

CAPITO NIGER PUNCTATUS (Lesson)

Limoneocha, 3 ♂ , 4 ♀ ; Lower Río Pucuno, 1 ♂ ; Cotapino, 1 ♂ , 1 ♀ .

The subspecific status of this species in upper Amazonia is in confusion. Several authors have disputed Brodkorb's (1939) two races, *macintyreii* of eastern Ecuador and *conjunctus* of northeastern Peru. Examining a large series from Colombia, Ecuador, and Peru, I fail to find any of the consistent geographic variations mentioned by Brodkorb. Furthermore, the 12 birds from Limoneocha show all extremes in pileum color and streaking of the ventrum. Bond (1954: 49) synonymized *conjunctus* with *macintyreii*, but distinguished *macintyreii* from *punctatus* on the basis of the amount of ventral streaking in one female from Villavicencio, Colombia. Two of four Limoneocha

females have the ventrum as lightly streaked as this female from Villavicencio. I therefore agree with Peters (1948: 25) and ascribe to *punctatus* birds of upper Amazonia from Colombia to northeastern Peru.

PICUMNUS RUFIVENTRIS RUFIVENTRIS (Bonaparte)

Limonecocha, 1 ♂ ; Cotapino, 1 ♂ ; Eugenio, 1 ♂ ; Sumaco, Palm Peak, 1 ♂ , 1 ♀ .

Chandler and I found these birds quite common up to at least 1,500 m on Mt. Sumaco, although the species is usually considered an inhabitant of the Tropical Zone (de Schauensee, 1949: 641). At Palm Peak, specimens were taken simultaneously with such typically subtropical forms as *Cyanocorax yncas*.

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